

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Patent Application of:

Inventors: Mohammed Al-Kaabi and Jamal Hematian
Serial No: 10 / 611,659
Filed: June 30, 2003
Title: Symmetrical Multi-Unit Railroad Car
Assignee: National Steel Car
Art Unit: 3617
Examiner: Mark T. Le

REPLY BRIEF

To: Mail Stop Appeal Brief- Patents
The Honorable Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is filed in response to the Examiner's Answer in this matter mailed on September 15, 2006 in this Appeal to the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office of the rejection, made 'Final' of the at least twice rejected claims 1, 3, 5 – 8, 11, 30 – 35, 38 and 42 in the above-identified patent application.

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This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. §41.37(c)(1)):

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The final page of **Section VII** of this brief bears the practitioner's signature.

III. Status of Claims

The status of the claims in this application are:

1. **Total Number of Claims in Application**

There were 49 claims pending in this application, numbered 1 to 49.

2. **Status of All of the Claims**

- A. Claims cancelled: Two, namely claims 4, and 10.
- B. Claims withdrawn from consideration but not cancelled: Thirty-two, namely claims 2, 9, 12 – 29, 36, 37, 39 – 41, and 43 – 49.
- C. Claims pending: Fifteen, namely claims 1, 3, 5 – 8, 11, 30 – 35, 38 and 42.
- D. Claims allowed: None.
- E. Claims objected to: None.
- F. Claims rejected: Fifteen, namely claims 1, 3, 5 – 8, 11, 30 – 35, 38 and 42.

The claims on appeal are claims 1, 3, 5 – 8, 11, 30 – 35, 38 and 42.

VI. Grounds of Rejection to be Reviewed on Appeal

1. Claims 1, 3, 5, 7, 8, 11, 30 – 35, 38 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida (US 5,343,812) in view of Weber (US 3,399,631).
2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Pileggi (US 5,2076,161).

The claims on appeal are claims 1, 3, 5 – 8, 11, 30 – 35, 38 and 42.

**VII. Argument
Grouping of Claims**

The claims under appeal include independent claims 1 and 7 and dependent claims 3, 5, 6, 8, 11, 30 – 35, 38 and 42. The claims rise or fall together.

**(A) Claim Rejections Under 35 U.S.C. §103
Statement of the Law**

For the sake of brevity, the applicant incorporates by reference the previous statements of the law under 35 USC 103, the underlying law not being a matter disputed by the Examiner or the Applicant.

(B) Claim Rejections Under 35 U.S.C. §103; Claims 1 and 7

The Applicant reiterates and incorporates all of its previous arguments, which it again submits to be sound, and sufficient to overcome the current rejections.

With regard to the Examiner's Answer, the Applicant makes the following comments:

First, as a preliminary matter, the Applicant has assumed that the reference to "Plager" at page 3, line 15, was intended to read "Ishida".

As a second preliminary matter, the Applicant has re-read the Appeal Brief. In a number of places the Appeal Brief indicates that Weber does not show a symmetrical arrangement of side bearing arms. This needs to be read in context. The claims in question relate to the combination of a symmetrical arrangement of articulated connectors and a symmetrical arrangement of side bearing arms. Weber does not show a symmetrical arrangement of side bearing arms in the context of the assumed starting point of a symmetrical arrangement of articulated connectors.

Admission of Missing Feature

The Applicant notes that the Answer commences with an internal contradiction: "It is true that neither Ishida nor Weber, alone, teaches a symmetrical arrangement of side bearing arms;

however the combination of Ishida and Weber as applied, is considered to include such symmetrical arrangement of side bearing arms.”

The test under MPEP 2142 requires that all of the features of the claim be shown or described in the prior art. The Answer clearly admits that neither of the cited references shows or describes the claimed features. That should be the end of the analysis: The art fails one of the three branches of the test. Whether it then passes the motivation to combine branch or not, the Answer admits that it has failed the first branch or the test already. The Applicant respectfully submits that this admission *alone* in the Answer ought to be sufficient to necessitate the withdrawal of the rejection.

Motivation to Modify or Combine

The crux of this Appeal is whether there is suggestion, motivation, or incentive, to combine or modify the cited Ishida and Weber references to arrive at the presently claimed invention.

(i) Characterisation of Ishida

The Applicant again takes issue with the characterisation of Ishida.

Motivation to modify or combine, if such there be (and the Applicant submits there is not), is most often found in the references themselves. References are to be read as a whole, and in context. The Applicant respectfully submits that the context of Ishida speaks against motivation to modify or combine in at least four ways: (1) Ishida does not refer to freight equipment; (2) Ishida does provide some indication that the context of Ishida is passenger equipment (3) Ishida does not refer at all to side bearing arms, and (4) Ishida’s disclosure falls some distance short of being “enabling” of the features of the invention presently claimed.

The Examiner’s Answer acknowledges that Ishida “is not very specific” on the subject of whether Ishida’s apparatus is freight rolling stock. The Applicant understands “not very specific” to be an admission that Ishida does not, in fact, identify the apparatus as freight equipment *at all*, and there are indications, most notably the use of powered trucks, that appear strongly to suggest passenger equipment. The Applicant notes that passenger equipment tends to be rather different from freight equipment. Further still, Ishida identifies “articulated vehicles”. Ishida does not at any location in the document identify an “articulated connector” as that term would be understood in North American freight service.

Inasmuch as the commentary that “*...the railcars of Ishida is certainly readable as freight cars because they are inherently capable being used to carry goods or freights*” is new, the Applicant has submitted a rebuttal, in the form of the Declaration of the inventor, Dr. Al-Kaabi. Applicant respectfully requests that this Declaration be entered into the record because Applicant could not have submitted this Declaration earlier since the issue being addressed by this Declaration was just raised by the Examiner in the Examiner’s Answer. According to the Declaration of Dr. Al-Kaabi, at paragraph 5, there is nothing in the Ishida reference that is suggestive of freight cars, whereas there is at least some suggestion that Ishida pertains to passenger equipment. The Applicant respectfully submits that contrary to the assertion in the Examiner’s Answer the statement that the railcars of Ishida are “inherently capable” of being used to carry goods or freight, and so therefore readable as freight cars is incorrect, and overbroad. For example, a baggage car is still a type of passenger car, no matter how much freight is placed in it.

In summary, it is not enough to say that Ishida leaves the matter uncertain. Either Ishida does, or does not, show or describe freight equipment. If it does not, then Ishida does not meet the requirement of showing or describing that element of the claim. Clearly, Ishida does not.

Finally, the Applicant notes that the Examiner’s Answer clearly admits that Ishida does not show or describe side bearing arms of any kind. With this statement, the Applicant heartily agrees.

(ii) Assertion of Benefits of Performance

The Answer makes the new statement that “... Note that Weber, Figures 2 and 3, shows symmetrically arranged side bearing arms located on both sides of car coupling 11 to control side sways or rolls; and that the use of such symmetrically arranged side bearing arms in between each pair of the adjacent railcars of Ishida would result in a *similar expected benefit*. (Emphasis added).

No, that is exactly the point.

The improvement in performance, and the overall reduction in tendency to derail was quite an *unexpected* insight and the realisation of this benefit arose because of the insightful analysis of the present inventors. If the commentary in the Office Action is correct, then one might expect whatever benefit was obtained by Weber’s side bearing arm arrangement (whichever embodiment might be chosen) would be obtained whether the articulated couplers were arranged symmetrically or not: there would be no reason to care if they were or weren’t symmetrically arranged. But it is precisely

that this is not the case that was the insight of the present inventors. To refute this new commentary, the Applicant again relies upon the Declaration of Dr. Al-Kaabi, submitted herewith. Dr. Al-Kaabi points out at paragraphs 10 and 11 that the overall performance of a symmetrically arranged car, as claimed, was not expected prior to the analysis leading to the present invention, and was, as far as Dr. Al-Kaabi is aware, not seen on earlier cars.

(ii) Logical Non-Sequitur No. 1.

The Applicant respectfully submits that there is no basis in the cited art, or elsewhere, for the statement at page 3, lines 20 – 22 of the Answer that “In view of Weber, it would have been obvious to one skilled in the art to provide side bearing arms to the interconnected car units of Ishida, in a manner similar to that taught by Weber, so as to control side sways of the car units”. If the context of Ishida is passenger equipment, this statement is simply not true at all. That is, the Office Action makes no demonstration of why anyone skilled in the art would either (a) conclude that Ishida is discussing freight equipment; or (b) employ in passenger rolling stock an articulated connector and side bearings as shown by Weber.

The Answer seeks to overcome this problem by using the rule of broadest reasonable interpretation: “...it is noted that Ishida is not very specific as to whether his railcars being freight cars or passenger cars or both; however, the railcars of Ishida is certainly readable as freight cars because they are inherently capable being used to carry goods or freights.”

This is to confuse (a) the right (indeed, the duty) during examination to interpret claim language in a manner reading on the largest reasonable scope of items; with (b) the entirely separate requirement of an *actual* basis is in the evidence of record showing the existence of motivation or suggestion to combine or modify. The rule of ‘broadest reasonable interpretation’ applies to (a). It does not apply to (b).

Here, there may be some argument that, for example, the disclosure of a “rail road car” by Ishida might encompass both freight and passenger rolling stock. But there is no basis for saying that because such an interpretation might include, say, a Schnabel car, that Ishida therefore shows a Schnabel car, and therefore since it is a Schnabel car to find suggestion, motivation, or incentive to employ the apparatus shown by Ishida to transport, e.g., electrical substation transformers. Clearly, while “rail car” may encompass “Schnabel car”, that, by itself, cannot provide motivation, suggestion, or incentive to carry transformers in Ishida’s car. Expressed more pithily: just because

both a cat and a horse fall within the term “four legged animal” does not mean that the mere showing of the existence of a prior art poster of a cowboy on a horse, by itself, provides suggestion, motivation or incentive to put a saddle on a cat.

Here, the Answer attempts to imply that since Ishida’s disclosure is uncertain on the point, therefore it encompasses freight cars as per (a) above, and then that “fact” can be boot-strapped to show motivation or suggestion to modify or combine under (b). This is nonsense. The Applicant respectfully submits that this kind of circular, self-generating two-step boot-strapping exercise is illegitimate as a means of finding suggestion, motivation, or incentive to combine or modify. Suggestion, motivation, or incentive to modify or combine are based on what a document actually shows and describes, not on the broadest interpretation of what it might have shown or described if the prior inventor had thought about it. Ishida does not make a positive showing or description of a freight car in the first place (and, on balance, reading Ishida in context probably suggests otherwise). That is the necessary starting point of the analysis.

(iii) Logical Non-Sequitur No. 2

A similar point can be made with respect to the non-sequitur in the commentary concerning enablement. In attempting to address the Applicant’s point concerning lack of enablement by Ishida, the Answer states: “...note that Ishida is an enabling US Patent that is presumed to be valid;...”

However that may be, the issue of whether Ishida is enabling with respect to Ishida’s *own invention* is not in any way relevant to whether Ishida’s disclosure is enabling with respect to *the features of someone else’s invention*. The Applicant again submits that *with respect to the present invention*, Ishida’s minimalist disclosure can not reasonably or fairly be said to be enabling of much of anything.

(iv) Characterisation of Weber

Again, suggestion, motivation and incentive to combine rest on the basis of reading the references in context.

With respect to Weber, the Answer concentrates on Figures 2 and 3 as demonstrating a symmetrical arrangement of side bearings.

There are two weaknesses in this argument.

First, the set of car units in question (4, 5, 6, 7) is not shown or described as being symmetrical in any event, as discussed at length in previous submissions. Thus, there is no basis in Weber to infer that a symmetrical arrangement of articulated connectors and side bearing arms would offer any special advantage suggesting its incorporation in Ishida, or anywhere else.

Second, as also noted in the Declaration of Dr. Al-Kaabi at paragraph 8, while Weber shows the embodiment of Figures 2 and 3, he also shows the embodiments of Figures 7 – 9; 10 – 12; and 13 – 15, none of which would provide the symmetry inferred in the Answer. There is nothing in Weber that would tell a person of ordinary skill in the art that the embodiment of Figures 2 and 3 would provide any particular benefit when used with the car of Ishida (or any other), any more than the other embodiments of Figures 7 – 9; 10 – 12; and 13 – 15.

If the embodiment of Figures 2 and 3 were identified as being preferred, or recommended by Weber, that might be one thing. But the contrary appears more likely. That is, the embodiments of Figures 7 – 9 and 10 – 12 might be more favoured by a person skilled in the art because (a) the side bearing extends past the longitudinal center line of the truck bolster, and hence the vertical loading is less likely to be eccentric with respect to the long axis of the truck bolster and so less likely to cause the bolster to twist about its long axis; (b) they may have a larger bearing area; and (c) they may allow a greater range of travel. At least some of this appears to be reflected in Weber's comments at col. 5, lines 21 – 38, and lines 53 – 59:

Col. 5, lines 21 – 38 (in the context of FIGS. 7, 8 and 9):

“The type of side-bearings portrayed by FIGS. 7, 8 and 9 differ from those shown in FIGS. 2 and 3 primarily in the design of the upper side-bearings attached to the car end structure. In this instance, car 4 is equipped with upper side-bearings 81 and 82 spaced equidistantly from opposite sides of the vertical center plane M – M but more closely together than upper side bearings 83 and 84 attached to the end structure of car 5. The side-bearings of both cars are of sufficient length in the longitudinal direction of the train to extend past the transverse vertical center plane N – N when the cars 4 and 5 are positioned on track of normally anticipated curvatures. With this arrangement of upper side-bearings, sway or roll forces of the cars may be transmitted to the bolster in the region of its longitudinal center plane N – N rather than to one side of such plane in a manner tending to tilt the bolster about an axis extending transversely of the car lengths.” (Emphasis added)

Col. 5, lines 56 – 59 (in the context of FIGS 10, 11 and 12):

“Both upper side bearings extend past the transverse median plane N – N of the bolster at all normally anticipated curvatures of the track on which the cars 4 and 5 may be positioned.”

The Applicant respectfully submits that

- (a) There is nothing in either Weber or Ishida that in any way suggests the importance of an arrangement that combines a symmetrical layout of articulated connectors with a symmetrical layout of side bearing arms;
- (b) there is nothing in Weber (or Ishida, for that matter) that suggests the use of the embodiment of Figures 2 and 3 as opposed to the embodiments of Figures 7 – 9, or Figures 10-12 which may themselves be preferred for the reasons stated above; and
- (c) there is nothing in either reference that suggests the suitability of the articulated connectors and side bearing arms of Weber (of whatever kind) in the equipment to which Ishida’s skimpy sketches or minimalist description might, by just the right combination of coincidence and chance, cause one’s imagination to turn on a fair reading and in context.

Symmetry Not Discussed by Weber or Ishida

As explained in paragraphs 10-12 of the Declaration of Dr. Al-Kaabi, and as discussed at pages 1 and 2 of the specification, the present inventors have found that dynamic performance is improved where the cars are symmetrical. Neither Weber nor Ishida gives any hint that there might be a dynamic performance issue, nor that there might be an advantage in employing a doubly symmetrical arrangement of articulated connectors and side bearing arms in a multi-unit articulated rail road freight car as presently claimed. The Applicant respectfully submits that there is nothing in either document from which a person of ordinary skill in the art would be motivated to arrive at the present invention.

Conclusion

The Applicant has submitted that, contrary to the rejections made in the office action, neither Ishida nor Weber shows or describes an arrangement of side bearing arms that is symmetrical relative to the central plane of a multi-unit articulated rail road car having a symmetrical arrangement of articulated connectors. Furthermore neither reference points to any special

advantage this doubly symmetrical combination of features might have, such as might provide incentive to modify or to combine. Given that this seems to be missing from both references, the Applicant respectfully submits that *prima facie* grounds of rejection of the claims have not been established. The Applicant therefore submits that the claims are presently allowable, and respectfully requests that the rejections be reconsidered and the claims allowed.

Respectfully submitted,

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IX. Evidence Appendix

The Applicant submits herewith the Declaration of Dr. Al-Kaabi herewith.